AMERICAN HICKORY IS STRONG IN WHEEL TEST

vantage in Resisting Reavy Blows.

Vitality of Steel With Other Types.

The wire wheel question continues to be one of great interest because although the hickory artifery type is popular and nearly universal in this country a swing toward the wire sort is noted. That is so, although as one commentator puts it; "In the early days of the automobile in this country the wire wheel was extensively used, but it lost ground, partly through the general opinion that it was unsightly and partly because it is more difficult to keep free from mud and in a presentable condition, due to the network of cross wires. These do not loom up as very great objections to its use, and the minute the American public decides that it wants it on its cars then the wire wheel manufacturer's problem is solved. It is just as difficult to sell a car in England, espe-cially, which is not equipped with wire to sell a car in England, wheels as it is in this country to sell one which has any other except wood artillery

SARATOG

ALBANY

Manufacturers here are testing wheels because they see a future for them in the United States. Whether the chances of a shortage in hickory is what has caused this or whatever else the reasons may be, wire is being tried out. It is particularly interesting because of a certain lack of data here to examine the results of a test made recently by Rudge-Whitworth, Ltd., a British firm of pioneers in the wire wheel line. In this test wire, wood and steel wheels were subjected to blows from an impact pendulum.

It was like an experiment the Society of Automobile Engineers saw made when on its visit to England last November. At that time only French hickory wheels were used. The visiting American en-gineers said that the French hickory is very inferior to the American variety and that had the best quality of Ameri can hickory been used the wheels would shown up as well as if not better than the wire wheels. They said too, that it was unfair to judge all wood wheels by the very inferior French blokery types, which while well enough manufactured were made of a variety of wood which is far below the American in quality and in seasoning.

Acting on this suggestion that Ameri can wheels be used, the Rudge-Whitworth firm accordingly sent to this country for can wheels be used, the Rudge-Whitworth firm accordingly sent to this country for a set of the best possible examples of hickory wheels. At the same time a set was also procured from France, as well as a set of steel wheels. There is every reason to believe that at least the American hickory wheels were the best of their kind, as they were specially ordered and the purpose explained to the maker. In making the tests a massive pendulum having a length of about 11 feet and carrying a bob weighing two pounds was used. This pendulum was allowed to wing through measured are and to strike against the rim of the wheel under test, which was mounted on a heavy iron spindle firmly fixed to a concrete foundation. An idea of this mounting may be gained from the illustrations.

This method of test is considered to be a better measure of the relative merits of the different types of wheels than decloringly used state test, which is simply a steady pull applied to the wheel and increasing in force until it breaks. This not a shock test as is the bendulum arrangement, the sudden blow imparted in the latter corresponding to the quick-side thrust to which a wheel is subjected in the car is going at considerable speed.

the same time have sufficient "give" to it to take up all possible, thus preventing the shock from being transmitted to the axie, differential gears and other driving mechanism. The condition of wheel after severe shock is also important, for on this depends the possibility of temporary

and repair. Owing to the difference in the weight Owing to the difference in the weights of the wheels a direct comparison is impossible, but a fairly good means of comparison is obtained by multiplying the total permanent deflection in inches by the weights of the wheels. This was done for the fourth and fifth blows, the results being given herewith. The minimum deflection and the least possible weight are both desirable fearures, and hence the lower product of these two the greater the merit of the wheel. Or putting it the other way around, the increase in wheel weight would naturally mean a decrease in permanent deflection.

The table is:

Total Permanent Deflec

wire. 20.2 33.80 0.3

The absence of figures for the second french wheel on the filth blow is because the fourth one smashed it. The other was demolished by the filth blow in the case of the first American wheel was to break the fellow, three spokes having been broken previously. The other had four spokes and two bolt heads cracked but the rim held. The late of the two French wheels has been cited. The steel wheels buckled at the hubs. On the first wite wheel seven spokes broke and four nipples pulled through. The other suffered no damage.

The Bureau of Highways of the Borough

wheel seven spokes broke and four nipples wheel seven spokes broke and four nipples pulled through. The other suffered no damage.

The tables bring out the slight superiority of the wire wheel over even the best type of American hickory wheel. The lowest products of the fifth blow show that one of the American wheels was superior to one of the wire wheels, but inferior to the other. The other wheels had to one of the steel wheels. The French hickory types were completely outclassed, bringing out forcibly the assertion made by the American engineers that the French wood is not to be compared with properly seasoned hickory from this country.

On this product basis, the special advantage to the wire wheel comes in the low weight, while the American wheel suffers, since it is the heaviest of the types tested. The steel wheel does not show up as well as might be expected, being interior to either the American wood or the Rudge-Whitworth wire types, despite its light weight as compared with the American product.

An oak wheel tested before the American society last November gave a product of 252 when deflection of a blow corresponding to the fourth of this test was multiplied by wheel weight. In comparing this high figure with the table herewith the criticisms against the use of oak are clearly justified. This poor showing of oak wheels is one of the great popularity of the wire wheel in England in particular, since many authorities hold that in a climate such as that of England the liability of hickory to warp prohibits its use. This wood being eliminated, there is only one logical wheel to 2se, and that is the wire type, the oak sheel being out of the question, due to steel the control of the presence of the reasons which has the question, due to steel the control of the presence of the presence of the great popularity of the wire wheel i

TECHNICAL TALK CUT OUT.

Decides for Simple Terms.

Vice-President of Moon Company

When automobiles first were introduced the average buyer was about as competent to judge a car as he was a locomotive. He heard a lot of technical talk, looked wise and felt foolish. The Moon Motor Car Company of St. Louis in its advertising and in its personal sale talk has been translating technical terms into everyday English for three years.

Stewart McDonald, the vice-president of the Moon company, long ago determined to cut out all involved and higher brow talk from the Moon merchandising and tell the buyer what he ought to know for his own protection, before buying any filler and expansion joints short leaf pine blocks, treated with sixteen pounds of

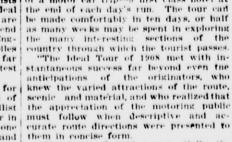
LOOKING FORWARD TO By this time there are few motorists of a motor car trip—a first class hotel at who do not know the name of the Ideal the end of each day's run. The tour can But Wire Appears to Have Advantage in Resisting

But Wire Appears to Have Advantage in Resisting

removed. It is expected to be the greatest stantaneous success far beyond even the season of the Ideal Tour. eason of the Ideal Tour. This trip has been known as such for several years. It was a combination of seenic and material, and who realized that FRENCH WOOD IS WEAK routes made up so that the automobilist out to make a vacation trip could cover in a dozen days an attractive country, one which appeals because of fine views and in the main—good roads. It was fixed route book of 1912 is essentially the

so that each day's travelling might find the motorist near a hotel where accommodations would be of the worth while kind.

The book of 1912 is essentially the lideal Tour unchanged, our contention being that of all the varied routes that may be taken in a tour of New England the Ideal Tour incorporates a trip of a





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CONN. HARTFOR

WHERE THE IDEAL TOUR GOES TO.

amid such an unrivalled setting. The evening lends an added clarm, as one forsakes the broad plazza for the cheerful warmth of the open fire to discuss the incidents of the day's journey.

"Touring in the fall has greatly increased within the past few years, so much has the motorist grown to appreciate the pleasures of an automobile tour amid the bracing autumn air of New Lossiand.

the year, At Briarcliff, Briarcliff Lodge is open until December 1. In New York the Great Northern is open all the year. The full list of subscribers to the ideal Tour is:

The Elton, Waterbury, Conn. Hotel Aspinwall, Lenox, Mass.
Curtis Hotel, Lenox, Mass.
The Equinox, Manchester, Vt.
Soo-Nipi Park Lodge, Sunapee Lake, N. H.

The backlet of the ideal Two covers thousand miles so arranged that the stuation this way? The black Two likes the natural outcome of the natural outcomes in places where a choice of stream, lake, forest, rolling factor, while the outcomes in places where a choice of stream, lake, forest, rolling factor, lating, with the attendant paragrams districtly lating and the rangel coast of eastern New England, which the said of routes might be hard. A representative of stream, lake, forest, rolling factor, lating with the attendant paragrams districtly lating which the said of routes might be hard. A representative of stream, lake, forest, rolling factor, lating factor, while the rangel coast of eastern New England, with the most enjoyable feature.

England, with the most enjoyable feature of the place of the pl

Shore Is in Good

Shape.

Ninety per cent, of the route up the Hud-

ROAD CONDITIONS ON

CITY TO LAY NINE TEST **PAVEMENT SECTIONS**

The Bureau of Highways of the Borough of Manhattan, New York city, is to lay nine of Manhattan, New York City, 18 to my nine sections of experimental pavenients on Second avenue. Previous administrations have laid only such pavenients as have been found adequate and no experimental work has been done by the borough. Bids sections will form a continuous pavement rom Houston street to Twenty-first street, he different sections being as follows Section t From the north side of Hous-

asphalt block pavement on concrete form dation in accordance with the standard specifications of the borough. Section 2 From the south side of Third street to the north side of lifth street: Medina sandstone pavement on concrete foundation, practically in accordance with the specifications of the Borough of Brook

Section 3 From the north side of Fifth street to the north side of Seventh street vitrified shale block pavement on concrete oundation.

Section 4 From the north side of Seventh street to the north side of Ninth street, sheet asphalt pavement with close binder on concrete foundation, laid in accordance with the standard specifications of the borough. From the south side of Eleventh street to the south side of Thirteenth street sheet asphalt with common binder on concrete foundation, laid in accordance with the standard specifications of the borough Section 5 From the north side of Nintl street to the south side of Eleventh street rock asphalt blocks on a concrete founda-

heavy oil per cubic foot, short leaf pine blocks, treated with sixteen pounds of water gas tar per cubic foot. Section 9 From the north side of Nineteeth street to the north side of Twenty-first street rock asphalt pavement on concrete foundation, in accordance with the standard specifications of the borough. Careful traffic records are to be kept and also records of wear on each of the several sections.

MOTORING IN THE FAR EAST.

Hard Work Driving an Overland with sand at least a foot deep and we were forced to make most of the trip on low and intermediate speeds. In fact we evaporated between fifteen and twenty gallons of water, but only used ten gallons of exactly traffic records are to be kept and also records of wear on each of the several sections.

The Willys-Overland Company of Tobledo has a letter from the China-American Trading Company, Overland dealers in Tlentsin, China, in which is related an interesting experience that shows

Waite Joins Thomas Sales End.

A late addition to the factory organization of the E. E. Thomas Motor (ar Company is George Waite, who takes the place of assistant sales manager. Mr Waite was formerly sales manager for the Simplex Motor (ar Company of Mishawaka)

in Tlentsin, China, in which is related an interesting experience that shows what load conditions the Far East has. In part the communication is:

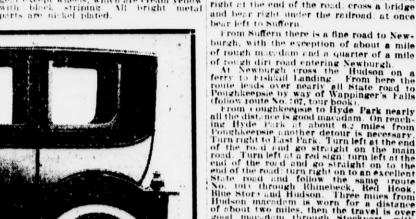
"We fiave just completed a trip from roads was entirely wrone. From start to finish of the trip has been made and we made it simply to prove to the Britishers that their theory that the low priced American cars were only good for town work on smooth roads was entirely wrone. From start to finish of the trip the hood of the trip the hood of the trip has been made and we made it simply to prove to the Britishers and continentals here that their theory that the low priced American cars were only good for town work on smooth control of the trip has been made and we made it simply to prove to the Britishers and continentals here that their theory that the low priced American cars were only good for town work on smooth control of the trip has been made and we made it simply to prove to the Britishers and cars were only good for town work on smooth control of the trip has been made and we made it simply to prove to the Britishers and the low priced American cars were only good for town work on smooth control of the trip has been made it simply to prove to the Britishers and the low priced American cars were only good for town work on smooth control of the trip has been made it simply to prove to the Britishers and the low priced American cars were only good for town work on smooth control of the trip has been made it simply to prove to the Britishers and the low priced American cars were only good for town work on smooth care of the low priced American cars were only good for town work on smooth care of the low priced American cars were only good for town work on smooth care of the low priced American cars were only

Most of the Way Up the West

son River to Lake George is in excellent shape at this time, but tourists should take

ANOTHER 1913 MODEL, THE PACKARD 48

In producing the Packard 48 for 1013 the springs. The wheel base of the touring for its state of 5½ inches. The maximum of the hattery have a gas proposimately by fackard blook of an event of the reaches about a constitution of the proposed for orders for the new model had been for the new model had been for the trace of the form the state of the triver by the fackard blook of the reaches about a constitution of the proposed for the decay and a stroke of 5½ inches. The maximum of the triver by the Book of the state of 5½ inches. The skewn delivers and a stroke of 5½ inches. The maximum of the state of 5½ inches. The state of 5½ inches. The maximum of the state of 5½ inches. The state of 5½ inches. The maximum of the state of 5½ inches. The state of 5½ inches. The maximum of the state of 5½ inches. The state of 5½ inches. The maximum of the state of 5½ inches. The state of 5½ inches. The maximum of the state of 5½ inches. The state of 5½ inches. The maximum of the state of 5½ inches



IDEAL TOUR'S GREATEST YEAR GARAGE THAT GIVES CAR OWNER A CHANCE

> Notifies Him Daily by Postal of the Movements of Machine.

> REPORTS ON INJURIES

If There Are Dents or Scratches He Learns of It by Mail -Other Points.

There is one garage in this city that is run on a very excellent system. In a sone of the smaller garages, although it has a capacity of something more than a hundred cars. Aside from its appointments, which are of the best grade and most most. ern type, it is in the matter of the system of checking automobiles that are stored there that this garage is considered admir-

The checking of the cars in this garage The enecking of the cars in this garage is on such a plan that many bad details have been avoided. When an owner puts a car in he gets a number and a brass check with this number stamped on it. The car is assigned to a regularly allotted station, where it is supposed to stand as long as it is in this garage. By this arrangement confusion is avoided, or nearly so, because the driver knows just where the car is and also knows where to bring it to be a long to the driver where to be a long it. also knows where to bring it to when he through with it.

Furthermore, as is pointed out in an article descriptive of this garage which appeared in one of the trade papers recently. the man in the office also keeps track of

A carcannot be taken out of the building until its check has been turned in at the office and it cannot be taken into the garage until the check is got at the office and placed on the machine. In this way the office can keep track of an automobile at office can keep track of an automobile at all hours during the day and night, and so the checking system has paved the way for still another system which is advanatgeous to the owner. When the car is checked in or out at the office the time of day is taken and marked down on a postal, which is mailed to the owner of the car that evening.
"He is by this means each morning made aware of the movements of his machine aware of the movements of his machine the day before and he is enabled to keep tabs on his chauffeur. This, naturally enough, does not appeal very strongly to many of the chauffeurs, for it puts a crimp in their joy rides, but it has been noted by many of the owners that it effects a considerable reduction in the cost of a considerable reduction in the cost of up-

keep.
"But the chauffeur is not the only one to "But the chauffeur is not the only one to whom this scheme applies, for there are some owners who are the fathers of bouncing boys on whom they like to get a line. The indulgent father would certainly not deprive his young hopeful of the pleasure he might derive through automobiling, but that same father might like to have his precious keep fairly good hours, and so if son tells father that he arrived home from his automobile ride at 2.30 by the clock and the postal comes along the next morning informing "pa" that the car was not checked and until \$2.30 A. M. he has grounds for being suspicious.

"Of course he will never think that his darling missook the four on the clock for a nine, and so the chances are that he will make an investigation, not into the checking system but into why his son went right out after being in at 2.30. Other members of the family who might otherwise use a car without authority are restrained by the daily checking system notices.

"Another checking scheme that is used and that is about as popular with the chauffeurs as the measles is sending out a card to the owner on which is a list of the various injuries that the car may have received in the course of its day's pourneying. Every time that a car is brought into the garage it is carefully gone over by an attendant, who makes a note of the damages and makes a report to the office. This protects he management of the garage as well as the owner, for it never fails to fix the blame for the injuries where it belongs.

"Even the washing of the cars has been reduced to a system. Instead of the old method of having the washers go around from car to car with a bucket of water and a cake of soap of the regulation scrub hard variety the method used is to have the soap proken up and dissolved in large vais. This constitutes a saving on both the soap cut still the cars, not to mention the fabor entailed in putting the soap on with a smell cake.

"The soap is saved because there are no small pieces to be thrown away and there is no great amount of whom this scheme applies, for there are

A publication in Les Angeles has inaugurated what is proving to be a suc-

cessful attempt to get work on an ocean to ocean highway actually started. stead of merely sending a pathfinding car to chart the route there has been TOUR TO LAKE GEORGE ent out a party in a Locomobile which is stopping at all towns through which the proposed highway is to pass and is arranging to have these various towns or cities appropriate money. The party also stops at the capitals of the various States through which they pass and are enlisting the air of the Governors and members of the legislative bodies.

As an instance of the work. Ariz., the first town to be visited after leaving California, raised more than \$1.-000 at an open air meeting and at the

Saves Manual Labor in Keeping Air

From Suffern there is a fine road to Newborzh, with the exception of about a mile of rough microad entering Newburgh.

At Newburgh cross the Hudson on a ferry to Fishkill landing. From here the route leads over nearly all State road to Poughkeepsie by way of Wappinger's Falls (follow route No. 107, tour book).

From coughkeepsie to Hyde Park nearly all the distance is good macadam. On renching Hyde Park at about 6.2 miles from Poughkeepsie good macadam. On renching Hyde Park at about 6.2 miles from Poughkeepsie another detour in less from Poughkeepsie another detour in less from Poughkeepsie another detour in less from the road and go straight on the main road. Turn left at a red signt turn left at the end of the road and go straight on to the end of the road and go straight on to the end of the road and follow the same trough thinlesheek, Red Hook, lifus Stors and Hudson. Three miles from Hudson macadam is worn for a distance of about two miles, then the travel is over good macadam through Stockport, with a slightly ruity stretch entering Stuyvesant Falls. It is also rough and ruity for about one mile entering Kinderhook.

After leaving kinderhook and macadam road may be followed through Stockport, with a slightly ruity stretch entering Stuyvesant falls. It is also rough and ruity for about one mile entering Kinderhook.

After leaving kinderhook and macadam road may be followed through Stockport, with a slightly ruity stretch entering Stuyvesant falls. It is also rough and ruity for about one mile entering Kinderhook.

Leaving the capitel of the State followed through shodiek Centre to Rensselrer. From here there is a fair brick and macadam through though the product of the falls of the state followed through under the followed through though the followed through the followed through though the followed through the fo

